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AMERICAN JOURNAL OF PHARMACY

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THE SCIENCES SUPPORTING PUBLIC HEALTH

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ROBERT J. RUTH

1891 — 1931

Founder of National Pharmacy Week

OCTOBER
1941

National Pharmacy Week

THIS institution is happy to take part in the observance of National Pharmacy Week, 1941, in recognition of the outstanding service rendered to the public, to the government and to the allied professions, by the nation's pharmacists.



Every pharmacist, in retail prescription or hospital practice, in manufacturing or research, makes a real contribution to public health. To every such member of this four-thousand-year-old profession, we are glad to pay our respectful tribute.

Philadelphia College of Pharmacy and Science



AMERICAN JOURNAL OF PHARMACY AND THE SCIENCES SUPPORTING PUBLIC HEALTH

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O U R C O V E R

ROBERT J. RUTH

"BOB" RUTH, as he was known to his host of friends, was born in Elyria, Ohio, February 19, 1891. He attended the Philadelphia College of Pharmacy and graduated in 1913. Following his college training, he became a member of the faculty of Southern Methodist University at Dallas, Texas. This position he resigned to work for Eli Lilly & Co., but later he returned to retail pharmacy and practiced his profession for seven years.

Between the years 1923 and 1927 Dr. Ruth acted as field secretary for his alma mater and was a major factor in enabling the college to erect its new building.

In 1927 he joined E. R. Squibb & Sons as chief of the pharmaceutical division of their professional service department. In this capacity he visited every college of pharmacy in the United States and, in addition, many medical and dental colleges.

It was in 1924 that Dr. Ruth proposed a national pharmacy week and his dynamic efforts were responsible for its success. Pharmacy week is now almost traditional in American pharmacy as well as in other English speaking countries and its value in promoting a higher professional regard for pharmacy is universally accepted.

Bob died in the service of the profession he loved while on a professional relations trip. Leaders like Robert J. Ruth are the soul of pharmacy and its hope for the future.

EDITORIALS

PHARMACEUTICAL EDUCATION SHOULD MEAN JUST THAT

IN THE current issue of the *American Druggist*, Mr. Mal Parks, managing editor, questions pharmaceutical educators, generally, for not including in the college curriculum a course in soda fountain management and operation. To quote Mr. Parks, "Even though pharmacy is a profession it does not explain why many unrealistic pharmacy schools continuously try to deprecate the importance of a soda fountain in connection with the operation of a successful drug store. It is, perhaps, an ideal time for these leaders in pharmacy to re-orient their thinking."

- These two pages call to your attention a controversial matter, together with the Editor's thoughts on the subject.

Frankly, we wish to ask by what authority this writer questions the results of careful thought and planning on the part of organized pharmacy. No one criticizes the journalistic ability of Mr. Parks, but we do feel that since he is neither pharmacist nor pharmaceutical educator, he is outside of his field in attempting to steer the destiny of pharmacy. Mr. Parks, we understand, is an authority in the ice cream field, wherein his past experience and training lie, but there is still a great deal more in modern pharmaceutical practice than knowing how to combine the ingredients of a good ice cream soda.

There is a close relationship between the fields of pharmacy and medicine but we are sure that no pharmacist would go so far as to propose a rearrangement of the standard medical curriculum. That is indeed the business of the physician and the American Medical Association.

We have within the organization of the American Pharmaceutical Association a Pharmaceutical Syllabus Committee composed of carefully selected leaders in American pharmacy. Upon them rests the responsibility of deciding what constitutes proper pharmaceutical education and they have done, we think, a good job.

In the final analysis, the difficulty today lies in the failure of many persons even in pharmacy to realize the trend of pharmacy.

As a result of innumerable influences pharmacy is rapidly becoming less a business and more a profession. All things point in this direction—the unprecedented growth in membership of the American Pharmaceutical Association, the increased importance of Hospital Pharmacy, the decrease in the patent medicine business and the increase in ethical drug products. All over the country professional pharmacies are springing up and even some of the ultra-commercial "drug stores" are visualizing the need for an up-to-date efficient prescription department.

We believe that this trend is largely due to a farsighted policy on the part of pharmaceutical educators who some years ago raised the educational requirements for pharmacists. This accomplished two important objectives. First, it reduced the number of pharmacists turned out yearly in a then highly overmanned field and, second, it placed the pharmacist on an educational level where he could command the respect of the other health professions as well as the government. The results have been most gratifying since the professional and economic status of pharmacists is constantly rising. The contribution of many state organizations and officials have also been important. In one eastern state, in particular, a similar farsighted policy, together with a belief in pharmacy as a profession, has placed the pharmacists of that state in an enviable position, with pharmacy nationally thereby gaining in prestige and importance.

By the passage of the recent food and drug legislation our government has served notice that it will no longer tolerate unscientific medication wherein the public welfare is ignored. We may expect, and rightfully so, further restrictions and regulations which we all know, if we will be fair, are in the public interest. It is indeed fortunate that due to past vision and planning pharmacy was in some measure prepared for these new responsibilities.

We who have devoted our lives to pharmacy feel that it has a glorious future and all our effort is directed toward its accomplishment. The goal of pharmacy is not great commercial achievement. It should and must be to render competent, skilled and valuable aid, working in harmony with physician, nurse and dentist in order that sickness and disease may be ameliorated and the standards of national health may be raised ever upwards. It becomes, therefore, the moral obligation of every *real* leader in pharmacy neither to equivocate nor compromise but to guard and promote the profession whose future must be and shall be great.

L. F. TICE

HUMAN PLASMA AND SERUM

CONSIDERABLE interest is being given the use of human plasma and serum both in general medical practice as well as in war medicine. Some indication of this intense interest may be seen in the proposed recognition by the U. S. P. XII of Citrated Normal Human Plasma and Normal Human Serum as official drugs. Of particular moment is the American Red Cross project of creating a national reservoir of blood plasma. This reservoir is intended for use by the Army and Navy in emergency transfusions as well as in the treatment of civilians injured in disasters.

In view of the importance of these substances, a paper by L. R. Newhouser and D. B. Kendrick, *U. S. Naval Med. Bull.* 39, 506 (1941), is of value since it describes the development and clinical applications of both plasma and serum. The historical background for this type of therapy is excellently presented with numerous references leading to modern patents covering the various methods for drying plasma namely the "Lyophile," "Cryochem," "Desivac" and "Adtevac."

Both plasma and serum are the therapeutic agents of choice for the emergency treatment of traumatic shock, hemorrhage, burns and other conditions in which fluid and electrolyte balance are altered. Human plasma has been found to be the most satisfactory fluid for the replacement of lost blood volume and the restoration of depleted blood proteins, and these findings have made plasma transfusions a procedure of common practice. Plasma offers certain advantages over whole blood although whole blood still has its place in practice. For example, plasma may be used without typing either donor or recipient and may be stored for many months in the liquid, frozen or dried state, and then administered safely. Another important difference is that in cases of shock it does not increase the concentration of blood cells which is already present.

Plasma differs from serum in that the former is the supernatant fluid separating when, after adding an anticoagulant such as sodium citrate, the cells are sedimented by centrifuging. Serum is the liquid portion separating after blood coagulates and, consequently, it contains no fibrinogen.

Liquid plasma and serum may be used safely after six to nine months' storage but there is some loss of prothrombin and complement. Frozen plasma and serum can be preserved indefinitely with-

out deterioration if stored at —15 degrees C. or below. Such material should be thawed at about 37 degrees C. to prevent precipitation.

Dried plasma, dried from the frozen state, as in the Lyophile or similar process, is most advantageous since it is stable at room temperature for at least five years, and, furthermore, it permits the preparation of *concentrated* plasma. If only one-quarter of the original water content is added to the dried material in "restoring" it a concentration four times that of normal plasma results. This is often highly desirable since, by the use of such hypertonic material, fluid is pulled by osmotic forces back into the circulatory system.

The availability of an unlimited supply of plasma and serum will go far in reducing war casualties, should war come, and it is the patriotic duty of all to support the American Red Cross in this effort. Persons interested in making contributions of blood for the preparation of dried human plasma should be advised to contact chapters of the American Red Cross participating in this program. Active blood collecting projects are now sponsored by Red Cross chapters in Washington, Baltimore, Philadelphia, New York, Buffalo, Rochester and Indianapolis. Other chapters are also completing plans for collection projects in their areas.

To date about 20,000 donations have been made and of these 9,000 have been processed and turned over to the navy and 6,000 to the army. It is estimated that at least 100,000 units are needed by each branch of the service and that this figure would be multiplied several times in case of war.



PHARMACY'S NEW HORIZON

By Robert W. Rodman

The traditional past, the improved present and the glorious future of pharmacy are outlined in this National Pharmacy Week talk, delivered by one of pharmacy's outstanding journalists.

THE entire profession of pharmacy is tremendously indebted to the contributions of those great men in the field of pharmaceutical education who have preceded us. From them has been handed down, generation to generation, the ideas, beliefs and practices which are the basis of our present day profession.

Traditions are glorious and no one appreciates them more than I, but they are dangerous too, if we permit them to blind us to the changes which have taken place since they had their origin.

Galen, for example, will always hold a high position in the history of both medicine and pharmacy, for he it was who raised the art of healing and the art of compounding from discredited callings to honored professions. His work with mixtures and compounds to which we refer today as galenicals, represented an important step forward in the treatment of disease. He lived a full life and then proceeded to rule medicine and pharmacy from the grave for the next 1500 years. Galen's theories of the human body and the nature of disease based on harmony between blood, phlegm, yellow bile and black bile were accepted without question and followed for generations, casting a pall over research and investigation during this period. No one dared question them. They were the accepted, the traditional way. It was not until the 17th century, when the first drugs from America reached Europe that Galen's theories were upset and medicine, with pharmacy, was released from the restraint that had tied their hands since 400 A. D. Cinchona was the drug which defeated Galen's theory, because it was a specific drug for a specific disease. It was regarded as an "impudent innovation" but its effectiveness was too apparent for its opponents to hold out against its use for long.

However, we shouldn't blame Galen. After all, he did a monumental piece of work in assembling and organizing the information which physicians and pharmacists who preceded him had developed,

and in expounding a theory of the cause and treatment of disease. If succeeding generations were to follow his theories blindly and without question the responsibility could hardly be his. The blame, of course, rests upon those physicians and pharmacists who allowed themselves to be bound by the restraints of Galen's teachings instead of merely accepting them for what they were, an expression of the best thought of one era, and then, having accepted them as such, going on from there to confirm or refute them and in so doing extend the knowledge of the use of drugs and medicines.

All this has a real bearing on the simple thoughts I wish to leave with you today.

You and I hear and read a great many discouraging statements concerning the profession of pharmacy. One man writes that pharmacy is a *vanishing profession*. Another says that the day of actual prescription compounding is past . . . that physicians write for only proprietary specialties today. Still another says that all this about detailing doctors is the bunk . . . that doctors won't listen.

These statements, for the most part, are made by practicing pharmacists, men in the field you are entering, and they are very convincing until you analyze the situation and find out why they are so pessimistic.

The basic reason, I believe, is the fact that pharmaceutical education for many years lagged behind the procession. Up until 1925, only sixteen years ago, the pharmacist went to college three days a week for two years. Then the course was lengthened to three years but it is only in the past few years that pharmacy was a full time, four-year college course leading up to the bachelor's degree.

Pharmacy for the two or three-year graduate was a profession of very limited opportunity. Some men had the vision to continue to study "on their own" and they went to great success in retail pharmacy or in manufacturing pharmacy, and it is to their everlasting credit, but by and large the pharmacists of that period received little recognition from the other professions and they could not begin to develop the great possibilities which existed for real pharmaceutical service.

It is these men who can see little future in the future of pharmacy and who make the discouraging statements you hear. They do not realize that the limitations of pharmacy were actually the limitations of their own ability, not of the profession.

Today we are just beginning to feel the effect of the infiltration of four-year graduates into the profession of pharmacy and the results are both dramatic and tremendously stimulating.

Where we formerly received little or no recognition from governmental agencies we are now given an audience and our requests receive consideration. In the United States Department of Education, before Congressional committees, in the military services, at the Food and Drug Administration, with the Public Health Service, we are beginning to assume the stature of a true profession. I believe we are on the way to achieving a Pharmacy Corps in the Army to which four-year men will be eligible. I know that Public Health Service is beginning to look at us with greater respect and appreciate the fact that the pharmacist is a key man in public health programs. They have learned, what we have always known, that a tremendous proportion of the public take their ills to the pharmacist first . . . before they think of consulting a physician . . . and the pharmacist is in a position to give them sound advice. Right now this is of the greatest importance.

Manufacturers are beginning to employ pharmacists for responsible positions. In former years they hired chemists for their laboratories and men with a few years of medical training as detail men. Today they want pharmacists. They are taking a greater interest, financially and otherwise, in pharmaceutical education and a host of attractive positions are opening up for graduates of the four-year course. The development of synthetic vitamin products and chemotherapeutic agents is going to make the production of drugs and medicines one of the most important industries of the day and the possibilities for you to carve a career in this field are almost unlimited. The door to industry, closed for years, is now open to you.

One of the most stimulating developments of this new era of pharmacy is the invitation extended last August to the American Medical Association to the American Pharmaceutical Association to hold a joint conference within the next few months on medical-pharmacal relationships. This conference will be unique in the history of both professions. Never before has it been possible. It is only because we have advanced our educational training up to the point where the present day pharmacist is able to render the physician greater professional services that this conference has come into being.

Perhaps the most significant result of increased educational requirements is the fact that more and more pharmacists are making

their prescription departments and their professional services their chief concern. The man or woman who spends four years of his life in a college of pharmacy is not willing to go out and run a general merchandising emporium . . . he is going to make his investment in his education pay dividends. As a result we not only have an increasing number of exclusive prescription shops opening up, but pharmacists generally are paying more attention to the development of their professional services.

Years ago you often heard the pharmacist say, "I'd like to be professional, but I'd starve to death." Now, I know that financial reward is not the goal of any professional man but, at the same time, it isn't necessary to starve to do a good professional job. In no code of ethics does it seem you must starve. The gifted surgeon, the skilled diagnostician, doesn't starve. What the pharmacist is finding out is that he can be a good pharmacist, follow the teachings of his college professors, observe the ethics of the profession, keep faith with himself in a practical way, and be more successful from a financial point of view than he can by being any other type of pharmacist. Built on service—greater stability—greater satisfaction that comes to one who renders a health service.

There is increasing evidence of this trend toward professionalism. The development of the American Professional Pharmacist a few years ago was indicative of it. The fact that the American Pharmaceutical Association during the past year had the greatest increase in membership in its history, and its convention in Detroit a few months ago had the largest attendance ever recorded are further indications of this trend.

Pharmacy today has entered a new era in its existence. Thanks to this institution and some seventy others which have led the way to higher standards of education, we are well on the way to recovery from the period when showglobes were packed away down cellar and emphasis was placed "out front" in the retail pharmacy.

Never before has this profession offered so great an opportunity to the young man or woman who enters it. The barriers which confined the pharmacist of yesterday no longer exist for you.

I have stressed our educational advances, but do not think that your superior training in itself is going to carry you on to success. It takes inspiration as well as education. You have got to say to yourself, "This is what I hope to accomplish and these are the things

I must do to achieve that goal. To these basic principles are related a great many details which will come to me in ideas and suggestions and I must weave them into my program but I must remember that they are isolated factors which can benefit me only as they become part of my plan. I must never let any of them assume undue importance in my mind and swerve me from my objective."

Choose your objective, plan your program and go ahead without worrying too much about precedents and traditions. One of my favorite quotations is, and I have long since forgotten the source:

Six loyal serving men have I
They serve me till I die
Their names are *who* and *what* and *when* and *how* and
where and *why*.

Those few lines typify for me the attitude you should assume. Don't take everything you are told as true without first investigating it. Don't allow yourself to be hampered by outmoded ideas. Just because something has been done a certain way for years doesn't mean necessarily that it is the best way. Don't be afraid to start off on your own, using your own ideas, and exercising your own initiative. Develop what I like to call a healthy dissatisfaction with anything short of perfection. As soon as you're satisfied, you're through. When you sit back and say "Well, that's the best that this job can be done," you are no longer of any value to your employer or yourself.

For far too long this profession has been static, clinging to ideas which are no longer true. It took 1500 years to throw off the cloak of Galen; let's show that we have learned a lesson from that experience. The limitations of pharmacy are the limitations of the individual who practices it.

We have needed the rich, fresh blood of better educated men and women in this profession. You are more than pharmacy of today—you are our hope of pharmacy for tomorrow.

RESEARCH DEVELOPING DOMESTIC SOURCE FOR DRUGS AND SPICES

The Division of Information of the Works Projects Administration reports on interesting experiments in the growth of much-needed drugs in the Western Hemisphere.

PLANS to develop a domestic source for a number of valuable herbs and spices, now imported almost exclusively from the Far East, are under way in Puerto Rico with every indication that this United States insular possession can be made a center of supply for the Western Hemisphere.

The Work Projects Administration recently approved a \$41,000 project which this year will undertake widespread plantings and cultivation of certain drug herbs and plants, vanilla vines, allspice, nutmeg, clove, cinnamon, and certain hardy species of bamboo. The project is sponsored by the Puerto Rico Experimental Station of the Department of Agriculture.

Considerable experimental work has already been done in determining the suitability of the soil and climate of Puerto Rico for such crops. With the funds made available under the recent authorization sufficient to employ approximately 130 Puerto Rican WPA workers, production of these essentials and further experimentation will be possible on a large scale. A staff of experts supplied by the Department of Agriculture will supervise the work.

Plantings of various tropical spices, drugs and woods have already been tested to determine whether these materials will grow successfully in Puerto Rico. These experiments have proven that it is possible to produce hardier, higher value, and greater yield plants and woods in Puerto Rico than were produced in the Far-Eastern countries where these materials grow naturally.

Plants to produce vanilla seeds have already been introduced into Puerto Rico. Under the supervision of agricultural experts of the Puerto Rico Experiment Station, WPA employees will plant the vanilla vines, the support trees, using hardier trees than are known to have been used for this purpose, and develop the culture required to multiply vanilla seed pieces. Most people are not aware that the vanilla bean is a product of a vine which cannot produce satisfactorily unless it is given strong support. One of the failings in the Far-

Eastern tropics where this plant is prolific is the difficulty of getting sufficiently strong support trees to bear sizeable vanilla vines. Experiments with newer types of support trees in Puerto Rico have proved extremely successful in vanilla vine culture, thus producing a higher field type of vine.

Among the various problems associated with vanilla bean culture is one dealing with the curing of the vanilla bean. Processing of this bean has apparently been done in a haphazard and unsanitary fashion. Chemists of the Puerto Rico Experiment Station have already shown the fundamental processes which take place when the vanilla bean is cured. Under this project, the actual processes will be tested and evaluated for further development on a commercial basis. The Puerto Rico experts will set up an experimental curing unit staffed by WPA workers, as a test station which, if proved satisfactory, will be recommended as a technique for commercial development.

Many spices such as allspice, nutmeg, cloves and cinnamon are now being introduced into Puerto Rico and it is apparent that such crops can be successfully raised on the island. The work under this project will be to multiply planting materials of these spices and thus develop a new nucleus from which spices may be obtained in this hemisphere.

The greatest world source of quinine is the East Indies. Early experimentation with the source plant of this drug has yielded excellent results in what appears to be the highest yielding species of quinine. Development of methods for producing abundant sources of quinine in Puerto Rico, and later, Latin America, is one of the primary objectives of this project.

Insects have caused farmers the world over the greatest difficulty in producing crops. United States farmers have used poisonous insecticides such as Paris Green and lead arsenate. These insecticides are extremely useful in killing the various insects but they are not particularly safe and have caused trouble both to domestic animals and to human beings.

There has been developed recently an insecticide material called rotenone which is harmless both to humans and animals but is death-dealing to insects and parasites. More and more, rotenone is now being demanded by the American farmer. However, the source of rotenone is a tropical plant. It has been found that various strains of this plant have been successfully developed in Puerto Rico with

the result that they have given extremely high yields of rotenone. The workers on this project will plant and multiply the seed materials of these plants, will distribute them for a nominal fee to the farmers of Puerto Rico and will present plantings to the Departments of Agriculture of the various Western Hemisphere Republics to enable the latter to produce rotenone crops.

The bamboo has been used by tropical farmers for furniture and by manufacturers in order to produce a wide variety of useful articles. The species of bamboo grown in the Western Tropics, especially in Puerto Rico, has been found unfit for such purposes because it is susceptible to boring insects. New species of bamboo have been introduced from Far-Eastern countries and in the new soils have been found to be extremely resistant to the boring insects. Thus it is proposed under this project to multiply these high value bamboos to produce sufficient quantities for industrial purposes and replace the loss of the Far-Eastern bamboo.

Another important aspect of the bamboo woods is the development of new types of products. Puerto Rico experts will supervise a series of shop studies undertaken by WPA workers to determine how these woods can be fabricated into new materials at a reasonable cost, and particularly whether such products can be manufactured in an assembly line fashion.

HOW CREAMS AND LOTIONS HAVE FARED UNDER THE NEW FEDERAL REGULATORY LAWS

By T. Swann Harding

CREAMS and lotions are used in part for cleanliness, in part as correctives, and in part to protect the skin. An emollient cream acts both as a lubricant and a cleansing agent, especially for a dry skin. Winter weather, heated homes, wind, sun and the elements also have a drying and wrinkling effect on the skin which can be counteracted to some extent by the proper use of creams, lotions and powders. Such preparations cannot, however, properly be expected to act as remedies for blackheads, pimples, enlarged pores, wrinkles, "creepy throat," or skin ailments generally. They should not be regarded as therapeutic agents nor should hormones, vitamins and other drugs be added to them for such purposes. It is true, however, that the massage attendant upon the use of creams and lotions does tend to promote healthful activity of the skin in part by increasing the blood supply.

It is difficult to define a "good" complexion. This is because the skin is not the same all over the body; even the facial skin varies considerably. Thus the skin around the nostrils and extending in a rough wedge-shaped way down the chin differs from that elsewhere on the face, just as the skin of the armpits and groin differs from that in areas immediately contiguous. The true route of passage between the skin and the lymph glands is not yet clearly known; it is presumed that there are lymph glands in the skin though their presence has not been demonstrated. It is known that fats applied to the skin pass on into the blood stream and none is known which simply combines with the skin oil locally when applied topically.

Lanolin or wool fat, used in many creams, is perhaps closest to human fat in composition and it too passes through the skin into the blood stream. Stage people use lanolin for the removal of make-up and the notion that its use promotes the growth of hair is a foolish superstition. It is normally rather heavy and yellowish and most women prefer it diluted and perfumed, at high prices.

The old-fashioned home-made creams of olive, almond and sesame oils were really excellent in quality but they became rancid too easily to lend themselves to commercial exploitation, though olive

oil foots are used in some commercial creams, but they contain high amounts of sulphur and can be irritating.

A typical liquefying cleansing cream may consist of five parts of arachis oil, twenty of ozokerite, seventy-four of liquid petrolatum USP, and one of perfume. A typical cream for a dry skin may have the formula, in parts, of cacao butter, five; lanoline, ten; beeswax, fifteen; distilled water, twenty-five; liquid petrolatum USP forty-three; borax and lauryl alcohol sulfate less than one each, and perfume one. A typical skin lotion for an oily skin might contain one part of betanaphtholdisulfonate, ten parts of carbitol, forty of alcohol, forty-eight of distilled water, and one of perfume. A typical make-up base consists of ten parts of monoglycerol stearate, seven of carbitol, one of stearic acid USP, five of alcohol, seventy-six of distilled water, and one of perfume.

Cold cream has been a favored cosmetic since the time of Tutahnkamen. In 1933 it was estimated that eight million pounds of cold cream were used in the United States annually, and the Census Bureau reported, October 9, 1941 (in *Domestic Commerce*), that the factory value of the cold creams was \$20,000,000 in 1940, and that of face lotions about \$8,000,000. At that time a smooth, white velvety cold cream that neither became rancid nor shrank or dried up could be made for from seven to fifteen cents per pound, perfume being the most costly ingredient and often doubling the price. This cream consisted of anhydrous lanolin, sun-bleached beeswax, parawax, triple-pressed stearic acid, white ceresin wax, mineral oil, distilled water, triethanolamine, glycerine, benzoate of soda and perfume. [American *Journal of Pharmacy*, January, 1934.]

The writer believes that it will now be of interest to consider briefly the extraordinary claims made for certain better-known cosmetics as compared with opinions available from authoritative sources and with action on the part of governmental agencies.

In 1936 advertising introduced the new Eldora cream. The claim was made that a new scientific procedure had enabled the manufacturers to incorporate a new live form of gold in this cream; they were said to be composed of millions of active atoms each carrying a natural negative electrical impulse. There was a preparatory cream and a revitalizer cream. Colloidal gold was said to be used in the creams. Scientists are aware that colloidal gold so applied to the skin would be absolutely inert; its introduction into face creams would in no way enhance their value. The *Journal of the American*

Medical Association (106 May 9, 1936, 1678) said "It would be a gross understatement to say that there is not the remotest scientific basis for the incorporation of colloidal gold into face creams and it certainly would be no exaggeration to describe the advertisement of Eldora Creams as a particularly blatant example of cosmetic quackery." Daggett and Ramsdell introduced these creams.

In *Drug and Cosmetic Industry* for May, 1936 (pp. 574-5), the main exploiters of vitamin E, the Pharmaceutical Specialties Company, of Chicago, had a double-page spread in large type telling about the benefits of using vitamin F (so-called) in facial creams to protect and defend the skin against blemishes, said to be due to deficiency of this vitamin. The same issue of the same journal (p. 629) contained an article, to which reference was made in the advertisement, on the evaluation of vitamin F, using rats. It was said that application of the vitamin to the tail of rats protected them from a "nutritional eczema" or scurf-like "dandruff," and it was implied that women could aid themselves perhaps by applying the vitamin in the same way. Actually vitamin F was little more than linoleic acid and some of its esters and lard would have been quite as effective for the purpose indicated as a vitamin cream.

On May 20, 1936, Montgomery Ward & Co. made stipulation with the Federal Trade Commission regarding their Footlight Turtle Oil Cream, as did also the Marcelle Laboratories of Footlight Products Company, admitting that the product did not consist wholly of turtle oils, as claimed, and that it would not, if applied externally, nourish the skin, act as a wrinkle eradicator, and aid the skin of all users while enabling them to retain a youthful complexion.

On June 17, 1936, the Commission announced a complaint against Bourjois Inc., and its selling agent and subsidiary, Barbara Gould Sales Corporation. This was because the trade name Barbara Gould Irradiated Skin Food was said to deceive buyers into believing that the product imparted nourishment to the skin, and acted as a food for it. Advertising matter also mentioned "youth glands" though the body contained no such glands for the products to stimulate. The use of words and phrases to create the impression that the products were of foreign origin was also to be discontinued.

On September 8, 1936, the Commission announced that Macy's Skin Food must not be so-called because it did not feed or nourish the normal skin. On October 10, 1936, there was complaint against Helene Rubenstein for misrepresenting the properties, nature and

effect of certain facial creams and other cosmetics. Representations were held false that the creams would nourish the skin or lips, restore youth to the skin, prevent crow's feet and wrinkles, or that they contained hormones, "living sparks of life," to increase their therapeutic value.

On December 10, 1937, the Federal Trade Commission again took action against advertising misrepresentations and claims of foreign origin in advertising of Bourjois and Barbara Gould preparations, among them the Barbara Gould Irradiated Skin Food, which had been rechristened Barbara Gould Irradiated Skin Cream in 1935. The makers must cease representing that irradiated products had the same beneficial effects as the sun's rays, that the cream was a food for skin or tissues, that it released oxygen to be absorbed by the skin, or that it benefited or restored the skin's natural youth glands. Barbara Gould was at that time an alias for Ruth Frances, at one time employed as beauty counsellor by the respondents, but they must cease claiming that she had discovered their products or had collaborated with scientists in their development.

On May 23, 1938, the Commission took action against the advertisements of Pond's Extract Company, which ran to the effect that Pond's Cold Cream was a deep-reaching agent which stirred the skin to vigorous action, and which, if patted on the skin, would cause dirt, make-up and impurities to be softened so they could be lifted from the pores. The makers must also cease claiming that Pond's Vanishing Cream melted away rough dead cells and that the lotion Danya enabled the hands to store up a so-called skin vitamin and furnished a new kind of skin care. The company then claimed it had found a way to put the so-called skin vitamin into its creams, giving women an important new scientific aid in skin care. They declared that vitamins thus applied to the skin gave more direct aid than when eaten; these claims were exaggerated and misleading. There is no skin vitamin and dietary and mouth induction of vitamins is the best procedure.

On September 15, 1941, the Commission was again considering the Pond's Extract Company, and their New Skin Vitamin Creams and Danya Lotion, said to contain 3100 units of vitamin A and 165 units of D per ounce. The former was advertised as a skin vitamin nourisher which enabled the user to store vitamins in the skin. The creams were also still advertised as deep-reaching, as penetrating the underskin, stirring it to vigorous action, ridding it of impurities and

make-up leftovers, wiping away lines and blemishes, and stimulating circulation. The facts were that having so small an amount of vitamin A in contact with the skin for so short a time could produce no beneficial effects. Even if all the vitamin A in an ounce of the cream were rubbed in at once this would still apply as vitamin A is not a special skin vitamin. Cold cream rubbed into the skin has only an emollient, soothing and cleansing action on the skin surface and affects the underskin very slightly. Its use may at times actually tend to produce injury by clogging the pores. The company was ordered to cease its claims that its creams had special value because of their vitamin content, that they prevented or erased lines or blemishes, that they reached or affected the underskin, or that they softened, loosened, or lifted out dirt, make-up and other impurities below the skin surface.

On May 29, 1938, the Jergens-Woodbury Sales Corporation was cited by the Commission for unfair competition in the sale of cosmetics. Woodbury's cold cream was said not to be sterile, germ-killing and preventive of infections and blemishes as claimed in radio, newspaper and circular advertising. An order issued September 15, 1941, restrained the makers from claiming that their cold cream was sterile and germ-free before and after use, that it would guard the skin against blemishes and prevent germ infections, or kill germs, or that its vitamin D content would enable it to fulfill the user's fondest hopes for beauty.

On November 10, 1938, the Armand Company, Inc., of Chicago, agreed with the Federal Trade Commission to discontinue the following representations for its Armand Blended Cream: That the preparation would transform the skin or enable the user to regain a youthful or radiant complexion, when in fact its action was limited to cleansing, softening and cooling the skin; or to claim that it was an astringent, or that it was entirely nonallergic.

On January 6, 1939, the Elizabeth Arden Sales Corporation was cited by the Commission regarding false claims made for Ardena Velva Cream Mask, Eight Hour Cream, Venetian Orange Skin Cream, and Ardena Orange Skin Cream. It must cease claiming that these would remove or prevent lines or wrinkles or have any other beneficial effect other than to temporarily soften their appearance. They must cease claiming that the products would lift the facial muscles, affect the facial contours in any way, refine the pores, nourish the skin, or correct skins lacking natural nutritive properties.

On June 7, 1940, the Commission ordered Lady Esther, Ltd., to limit claims for Lady Esther Face Cream to the facts, i. e., that it cleanses the outer surface of the skin and exterior pore openings and by temporary absorption for the time lubricates the skin. The company must cease making claims for deep penetration, for the cure or correction of dry skin, for the product being efficacious for both oily and dry skins, for the prevention and removal of wrinkles, facial blemishes and blackheads, and to the effect that the product was a dust solvent, removed soot, dirt, dead skin cells and skin waste matter generally. The company could not live up to these claims as they were adjudged false.

On November 30, 1939, the Commission cited the Chas. H. Phillips Chemical Company with making the following false claims for its Milk of Magnesia Cleansing Cream and its Milk of Magnesia Texture Cream: "Help overcome 'acid' skin. You know how milk of magnesia taken internally relieves excess acidity of the stomach. In just the same way these new type milk of magnesia creams act externally on the excess fatty acid accumulations on the skin and help to overcome unsightly faults and aid in beautifying." The facts are: Milk of magnesia has no therapeutic value in treating skin acid, skin blemishes, enlarged pores or fatty-acid accumulations on the skin; it will not penetrate or cleanse the pores or improve the skin texture; there is no such pathologic entity as acid skin; the quantity of fatty acids accumulating on the skin is always small and milk of magnesia will not neutralize such fatty acids as it does the hydrochloric acid in the stomach.

It is obvious from this review of well-known products that the tendency is far greater to make false, misleading or exaggerated claims for cosmetics than to manufacture and sell cosmetics that are dangerous to health. It is true that creams containing mercury are harmful but such creams rarely if ever appear in interstate commerce.

Possibly one of the most dangerous creams recently sold, at least potentially, was Endocreme, which was denounced editorially in the *Journal of the American Medical Association* for April 9, 1938, as "A cosmetic with a menace." It contained estradiol. It was exploited by the Hirestra Laboratories Inc., which called it more than a face cream—but a vital cosmetic which would tune up underlying tissues and reduce wrinkles in later life. The medical journal called attention to the fact that such a cream could affect the menstrual cycle, induce changes in the breasts, genital and reproductive organs,

and might even tend to the production of cancer. It said: "The continued reckless and indiscriminate use of this substance in a cosmetic cream is certainly unwarranted until it has been proved beyond the shadow of a doubt that the menace clearly established in animals does not likewise prevail in human beings."

Work later published in the *J. A. M. A.* for July 2, 1938 (v. 111 p. 11ff) established the cutaneous absorption of sex hormones and proved that when so absorbed they could cause marked sexual changes in experimental animals. The cream used in this work was bought in the open market, contained about 0.625 milligrams of estradiol per ounce, and was used in one-fifth the quantity women were advised to use.

In the *J. A. M. A.* for March 18, 1939 (v. 112 p. 1045ff), Cyril M. MacBryde showed that when estrogenic hormones were applied to the skin in the mammary region of the female, growth of the breasts could be induced and would continue as long as the cream was used. Systemic effects also were produced, such as on the menstrual function. The skin can obviously absorb estradiol in such a vehicle as lanolin. The ointment used in this work was composed of hydrous wool fat and petrolatum containing 5000 units per gram of estradiol or of estradiol benzoate; it was applied directly to the region of the breast and rubbed in five minutes.

We may turn now briefly to the effects of enforcement of the Food, Drug and Cosmetic Act upon creams and lotions. These were few, because actually dangerous products of this kind were quite rare, but they were proceeded against immediately the act went into effect. A list of Notices of Judgment concerning cosmetics appeared in May, 1940, and Notices 17 to 22 are concerned with creams and lotions.

Notice 17 held Madam C. J. Walker's Tan-Off to be adulterated and misbranded, because it contained ammoniated mercury; it was recommended to brighten a sallow or dark skin and for the treatment of freckles and blotches. Notice 18 concerned Miller's Anti-Mole, recommended for the removal of warts and moles and containing nitric and acetic acids in quantities that could readily be injurious. Notice 19 related to O. J. Beauty Lotion, which contained mercuric chloride, and was also recommended for treatment of freckles, pimples and superficial facial discoloration.

Notice 20 concerned the adulteration and misbranding of Othine, a skin bleach especially prepared for the removal of freckles and

containing ammoniated mercury. Notice 21 announced that Palmer's Antiseptic Skin Lotion was adulterated and misbranded as it contained corrosive sublimate; it was recommended to remove pimples, dandruff, eczema and itching scaly eruptions. Finally Notice 22 held Soule's External Lotion, recommended for treatment of tan, freckles and pimples, and containing mercuric chloride, to be adulterated and misbranded.

These products are not well known; furthermore, they are not, strictly speaking, what consumers regard as simple cold creams or lotions. The Notices of Judgment issued May, 1941, Nos. 31 to 50, in no case concerned creams or lotions. It seems safe to conclude that poisonous products are rare in this field and spectacular cases of toxic effects will be very limited in the future. Allergic response, of course, remains ever with us. False claims incline, however, to be the commonest offense under the new regulatory laws.

CORRESPONDENCE

STEN WIEDLING
c/o Astra
Södertälje
Sweden

August 27, 1941.

To the Editor,
American Journal of Pharmacy,
Philadelphia, Pa., U. S. A.

Dear Sir,

As a scholar of the late Professor Einar Naumann, of Lund, Sweden, I would like to occupy a few lines of your journal to mention his works on *Daphnia magna*, as I understand that there is a considerable interest in this subject in U. S. A.

Yours very truly,

STEN WIEDLING,
Licentiate of Science, Manager of the Physiological Laboratory, Astra, Söder-tälje, Sweden.

Some Notes on the Experimental Use of *Daphnia magna*

During the last fifteen years several papers on pharmacologic investigations, carried out with the small crustacean *Daphnia magna* (belonging to the group of Cladocera), used as a biologic indicator or reagent, were published in the U. S. A. The first of these papers was that by L. G. Freeman (this Journal, 463-473, 1928), whereas J. F. McDonnell probably used another species of *Daphnia*, i. e., *D. pulex* (M. Sc. Thesis, 1927). Especially Viehoever is to be thanked for his extensive research on *Daphnia magna* for pharmacologic and assay use (since 1928, see bibliographies in this Journal, pp. 97 and 365-366, 1937). In 1935 Viehoever succeeded in propagating this small animal in the laboratory (this Journal, 103-130, 1935). The latest research work on the pharmacologic responses of *Daphnia magna* was done by Sollmann and Webb (*J. Pharm. and Exp. Ther.*, 71, 261-267, 1941).

As the European investigations on the experimental use of *Daphnia magna* evidently are unknown to the American authors on this subject, it may be mentioned that Professor Einar Naumann, the prominent Swedish limnologist (1891-1934), of whom the writer of these lines was a scholar about the year 1930, succeeded in cultivating *Daphnia magna* in 1918 and kept it living in his laboratory for the rest of his life: "from year to year, without respect to the seasons." His first paper on the cultivation of this pet animal of his dates from 1922 (in: *Skrifter utgivna av södra Sveriges fiskeriförening*). Other papers on the same subject from various aspects followed in 1923, 1924, 1925, etc. (See the complete bibliography by Aug. Thienemann, pp. 28-41, in Naumann's biography, *Travaux de l' Assoc. Int. de Limnol. théor. et appl.*, vol. VIII: T. II, *Congrès de France*, 1937). Also *Daphnia pulex* was successfully cultivated by Naumann. Naumann and his co-workers did not only study the general life conditions of *Daphnia magna* but also used laboratory cultures of it for limnologic investigations, both theoretical and practical, and for pharmacologic and toxicologic research (more than twenty papers).

At the time of his too early death, in 1934, Naumann was working with another crustacean, *Artemia*, this one being a saline form, also promising much of interest.

STEN WIEDLING.

SELECTED ABSTRACTS

From the Current
Literature of
Science

Hospital Masks: Their Bacterial Filtering Efficiency and Resistance to Air Flow. (A Comparative Study.) By R. Rooks, L. J. Cralley and M. E. Barnes. *Public Health Reports*, July 11, 1941. This appears to be the first of a series of interesting papers which probably will be published by the workers on this subject. The possible occurrence of pneumonia and epidemic meningitis in our army camps and the increased interest in the bacterial counts of operating room air and attempts made to sterilize this air, makes this article timely and important. Some workers feel that adequate masking is the most important procedure, in addition to rubber gloves and gentle handling of the tissues, that a surgeon can carry out to prevent infection in clean operative wounds.

Two problems are discussed in this paper; the determination of the bacterial filtering efficiency of various textiles and materials and determining the actual resistance of air flow to these same materials. By solving these two problems the authors feel that it should be possible to devise a surgical mask such that in use most of the air would be forced through the mask and not around it. The technique, apparatus and procedure are very adequately described and illustrated. The workers feel that they are justified in making the following conclusions:

- (1) The laundering of gauze enormously increases the bacterial filtering efficiency with only a slight increase in its resistance to air flow.
- (2) The maximum bacterial filtering efficiency of gauze masks is reached after twenty periods of laundering.
- (3) A six-layer gauze mask (42 x 42 strands) after twenty launderings showed a 97 per cent. bacterial filtering efficiency.
- (4) Of the various materials tested, cellucotton showed an advantage insofar as high bacterial filtering efficiency and low resistance to air flow are concerned. Certain disadvantages to its use in masks exist.
- (5) Materials having the same resistance to air flow vary widely in their bacterial filtering efficiency.

E. A. M.

A New Treatment for Lepers. Douglas Collier. *The Modern Hospital*, August, 1941. The author points out that due to the international situation, which is bringing millions of men from the States into close contact with citizens of Central and South America and Hawaii and the Philippines, where leprosy is endemic, we may expect to see an increase in the number of cases of leprosy.

Although the total number of new cases of leprosy will probably be small, it is most important that an early diagnosis be made of this highly infectious disease. There are two distinct types of early cases. The commoner type begins with an area of anesthesia to every light touch and a loss of pigment from that area. Acid-fast bacilli are seldom found in the skin scrapings of this type. It is important to remember that in many cases the presence of acid-fast bacilli is noted only after the disease has progressed a long way and has taken a firm hold on the patient. The other type of leprosy is characterized by a red raised area which is not anesthetic but which usually shows the presence of acid-fast bacilli.

The use of diphtheria toxoid (formol) as a method of treatment in leprosy is being tried in many leprosariums as a result of its development at the Chiengmai Leper Asylum in Thailand. In this institution more than 50 per cent. of early cases became inactive within six months and were discharged as symptom free after twelve months following treatment with diphtheria toxoid. This evidence suggests that in toxoid we have a means of protection against leprosy.

E. A. M.

Observations on the Use of "Phenol" Larvicides for Mosquito Control. F. L. Knowles, W. V. Parker and H. A. Johnson. *Public Health Reports*, August 15, 1941. A number of tests, in both the laboratory and the field, undertaken to determine the value of commercial larvicides generally referred to as "phenol" or "phenolic" larvicides, are described in this report. These larvicides contain cresylic acid in sulfonated oil and have been reported to be effective in antimosquito work in heavily polluted waters, stagnant pools under buildings, places where oil larvicides in usual quantity have been unsatisfactory and even have been used in some areas for general control of mosquito larvae.

For this study a compound having a phenol coefficient of ten to fourteen is diluted with water in the ratio of one to thirty and applied to the water surface as a fine spray. The results so obtained were

compared with those obtained using a kerosene spray as well as an untreated sample as controls. The conclusions reached by the workers may be summed up as follows:

(1) Under the conditions of these experiments, phenol larvicide (diluted one to thirty) applied at rates varying from ten to ninety-five gallons per acre was less effective than kerosene.

(2) Phenol larvicide, as tested in this study, was harmful to fish. In the laboratory the larvicide applied at the rate of fifty gallons per acre killed 100 per cent. of fish but only 16 per cent. of larvae, while kerosene applied at the rate of twenty-five gallons per acre killed 99 per cent. larvae but no fish.

(3) The phenol larvicide as used in this study, because of its low toxicity for larvae and detrimental effect on fish, does not appear to be a desirable larvicide for general mosquito control.

E. A. M.

Treatment of War Wounds Based on Their Bacteriology.
Lt. Col. T. Sweetser. *The Military Surgeon*, July, 1941. The article first reviews the method of treating wounds in the last World War during which time the author first served with the British and then with the A. E. F. where he became the bacteriologist and pathologist of a base hospital in the advanced section. After the war he became a surgeon in the reamputation section of an army general hospital. In recalling his work during these periods he was amazed with the prominence of anaerobes in the early bacteriological picture of wounds without causing gas gangrene and with the fact that they either killed the patient quickly or disappeared soon from the wound. Of all organisms, hemolytic streptococcus was the most important, persistent, most fatal and was most likely to be reactivated by later surgery. According to the writer, it was by far the most common cause of death after war wounds. *Staphylococcus aureus*, another important aerobe, frequently found, was less dangerous than streptococcus. Early infections usually showed anaerobic infection with or without associated streptococci while all late fatalities showed streptococcus infection. Great efforts were made to find carriers of hemolytic streptococcus among the surgical and nursing staffs.

The author considers the following treatment of recent wounds as basic. Debridement and thorough exploration of the deep pockets and tissue planes to remove devitalized tissue, blood clots, etc. This should be followed by drainage and immobilization in a plaster cast.

It is recommended that wounded persons should receive tetanus antitoxin while those badly wounded should also receive polyvalent antitoxin against gas gangrene. Sulfanilamide should be sprinkled in the wound during debridement (five to fifteen grams) and should also be given by mouth for several days. This drug and others in its group is more effective against pyogenic cocci than any other antiseptic and has the added value of discouraging, to some degree, the growth of clostridium welchii and vibron septique. X-ray treatment as prophylaxis against infection is questionable. Suturing of wounds unless of the *less* severe kind is considered *not* practicable. It is considered much safer after debridement, especially after excision of much muscle or in the presence of fracture or with prospect of prompt further transportation of the patient, to sprinkle sulfanilamide in the wound, pack it with vaseline gauze or plain gauze and immobilize in a plaster cast.

The sulfonamide group, the most effective of chemical antiseptics, is compared with other antiseptics such as acriflavine, 1 per cent. acetic acid, Dakin's solution, etc., with respect to the invading organism. The author includes a table comparing the effectiveness of the sulfonamide group against various bacteria of importance in wound infection, and also a list of twenty-five important and timely references.

E. A. M.

The Cigarette, the Soldier and the Physician. Maj. C. W. Crampton, U. S. A. M. R. *The Military Surgeon*, July, 1941. The purpose of this article, which includes fifty-one references, is to review the matter of smoking, particularly cigarette smoking, with reference to the soldier—"to outline the topography of this much disputed territory—to point out some pitfalls—and perhaps to clarify some reliable landmarks, in the hope that the course to be followed may be scientific, reasonable and human-wise." The discussion considers (1) the soldier's viewpoint, (2) the research field, (3) the heart and circulation, (4) the "soldier's heart," (5) the respiratory tract, (6) summary and recommendations. Furthermore, the research field is divided into four areas for consideration, tobacco, smoke, the effects on animals, the effects on man. Some interesting facts brought to light as a result of research in tobacco are as follows: Although there are many diverse chemical constituents of tobacco, different kinds of tobacco have been found to vary in constitution, depending on aging, curing, etc. However, unless tobacco is chewed

or snuffed, none of its constituents make the slightest difference whatsoever to the smoker, unless they make a difference in the smoke itself.

The chemical composition of tobacco smoke differs from the chemical composition of the tobacco from which it rises. Tobacco smoke varies as delivered to the smoker through a cigarette, a pipe, a cigarette holder, filter, etc. It varies as to its source—from the end, middle or butt of the cigarette. Some other factors are speed of combustion, temperature of combustion, packing, moisture content, chemical constituents of cigarette paper. With respect to experimentation on animals and human beings the author feels that research on the former is one stage removed from application to human welfare which is our only concern. But on the other hand, because men differ so widely in their response to tobacco it must be foremost in mind when conducting research, interpreting data, and especially when giving counsel to individuals. The article points out the physiological effects of cigarette smoking on the circulatory, nervous and respiratory systems emphasizing the mental, emotional and other psychological considerations. The author gives numerous references and cites a striking episode incidental to his own experimental work which illustrates the dramatic variations among individuals with respect to smoking.

Because he considers the nicotine found in the tobacco and cigarette smoke the most harmful by virtue of its remarkable affinity for the autonomic ganglia—which it first stimulates and then depresses—the author makes the following recommendations: (a) Cigarettes should be burned slowly which reduces the amount of nicotine in the smoke and irritation it may cause to the mouth, (b) discarding of cigarette butts, (c) avoidance of closed-room smoking, (d) wider time intervals between cigarettes.

E. A. M.

The Dick Reaction and Scarlet Fever Morbidity Following Injections of a Purified and Tannic Acid Precipitated Erythrogenic Toxin. M. V. Veldee, E. C. Peck, J. P. Franklin, H. R. Du Puy. *Public Health Reports*, May 2, 1941. This is a report of a study with respect to the effect on the Dick reaction following injections of a tannic acid precipitated erythrogenic toxin. The work covers a period of four years and approximately 65 per cent. of the grammar school children in both rural and urban schools in two large counties. It is believed that as a result of this study some important

immunological facts are brought out which are applicable not only to scarlet fever but also to other diseases having a similar basis for acquiring immunity. Some of these observations are as follows: The amount of antigen required in different individuals to change a reaction of susceptibility to one of immunity varies over a wide range. In this particular study some individuals required as low as a single injection of 750 S. T. D.; in others many times this amount was needed. However, the majority of susceptible children respond favorably to the injection of an amount of antigen which is within the range of practicability. It is also true that certain individuals with a negative skin reaction easily shift back to a positive one. Once an individual has acquired a negative reaction through clinical or subclinical exposure it appears to have somewhat greater permanency than that following injections of antigen. Yet this superiority may not be significant and may be explained on the basis that (a) those who acquire a negative reaction from subclinical exposure are those who are most easily immunized or (b) that their stimulation is spread over a longer period of time as contrasted to the brief period accompanying injections. There is some evidence which indicates that a positively reacting child of six is more difficult to render negative than one of ten or twelve years of age. Furthermore, the risk to the individual in having a positive reaction grows progressively less with advancing age.

From an analysis of the morbidity data it appears that a negative Dick reaction is a dependable index of protection against clinical scarlet fever. It makes no difference whether the negative reaction has been acquired through clinical or subclinical experience or from the injection of an antigen since the morbidity data show failures in both instances. In short, injections afford just as good protection against an attack of scarlet fever as that afforded by the acquisition of a negative reaction through clinical or subclinical exposure.

The dosage, the injection method, and the time interval which seems practicable and effective for children of grammar school age, when purified and tannic acid precipitated hemolytic streptococcus erythrogenic toxin is used, is three graduated injections (750, 3000 and 10,000 S. T. D.) spaced at two-week intervals and injected in 0.1 cc. doses intradermally, preferably on the outer surface of the upper arm. It is not considered necessary or advisable to attempt the immunization of persons beyond grammar school age.

E. A. M.

S O L I D E X T R A C T S

A Miscellany of Informative Items, the Sources of Which Are Available on Request

Two decades ago, vitamin products were practically unknown in the drug store. In 1940, \$100,000,000 worth of these commodities were sold through pharmacies and other outlets. Yet, it is estimated that only 3 per cent. of the general populace subject themselves to regular vitamin medication.

AJP

Should this country ever be so unfortunate as to have its foreign supply of quinine removed, sufferers from malaria need have no worry. Two derivatives of sulfanilamide, namely promin and sulfadiazine, have given evidence of definite antimalarial activity, not enough to replace the good old standbys, quinine and atabrine, but sufficient to catalog them as possible substitutes.

AJP

The coming of the winter season gives timely importance to the warning of an Omaha physician that many cases of illness, especially those of children, are treated as "common colds", whereas the patient has something much more serious, even though exhibiting only the symptoms of an inconsequential infection of the upper respiratory tract. He points out that poliomyelitis, pneumonia, meningitis and many other important diseases start with "cold" indications.

In addition, what not to do for these patients is as vital as what to do, especially if medical aid is not readily available. Among the actions to be avoided are the following—giving cathartics, pouring oily drops into the nose, rubbing the chest with medicated greases, attempting to alkalize, allowing a child to get out of bed while running a fever, allowing a sick child to mix with others. Quite naturally, the physician urges prompt consultation with the family doctor, should things like sneezing, coughing and running nose develop.

AJP

Medical circles are delighted with the fact that life expectation is greater today than ever before, and that the average age of men and women is higher. All of this has been brought about by the conquest

of many of yesterday's dread diseases. Tuberculosis, however, beaten back as it is, is still second in importance as a cause of death among men twenty to thirty-four years of age, while most illness from the "white plague" is still in the fifteen to twenty-nine age group.

AJP

A mobile base hospital in the United States Navy purifies its drinking water by treating it with chlorine, alum and soda ash, and then filtering it through four sand and gravel tanks.

AJP

How many moderns know what Woad is? Dioscorides and Pliny knew it. Caesar used it. Elizabethan Englishmen cultivated it by Royal Proclamation. According to a writer in the Australasian Journal of Pharmacy, Woad, or Isatistinctoria, was the natural forerunner of artificial blue dyestuffs, cultivated first on the Continent and introduced to England in pre-Roman times. Its juice could be mixed with wood ash to produce colors varying from murky blue to dark green. Some used it to dye their bodies for ceremonial purposes. Others used it to color clothing. For want of something better, it was in great demand, and crops of woad were so valuable that they could be grown only by permission of the King. But Perkins' great accident in 1856 produced a substance that altered the dye industry so much that, in England today, woad is only a memory, or a botanical garden curiosity.

AJP

Ersatz "iodine" under the name Jodana is now supplied in Germany by Schering. It is described as a "complex brom-iron-thiocyanate methylated halogen phenol" and it is for use as a general antiseptic.

AJP

Organic chemistry's achievements almost make us wonder about the future of inorganic chemistry. Zeolite, for years a standby in industrial water purification, may in some instances be replaced with a synthetic resin which too acts by ionic interchange.

AJP

One cannot but admire the fortitude of the British in the present world chaos. The announcement of the release of the twenty-second edition of the Extra Pharmacopoeia by Martindale is somewhat surprising in face of the difficulties that such a careful and painstaking work requires. Our compliments to what is one of the finest references in pharmacy.

BOOK REVIEW

Drug Store Management. By Herman C. Nolen and Harold H. Maynard. McGraw-Hill Book Co., Inc., New York, N. Y., 1941. 570 pages including index. Price: \$4.00.

This book has been written both for classroom instruction and for those in business. It includes records of various types of stores as well as the experiences, ideas and suggestions of many pharmacists and manufacturers.

It is not elementary but is easily understood. Among its thirty chapters are included pharmacy as a career; getting started in the drug business and all that it entails; building and construction; buying goods and the right quantity; pricing; sales promotion including window and interior displays; salesmanship; merchandising, which is broken into many detailed parts; developing professional business; payroll; store policies; accounting; laws and legal principles; insurance and meeting competition.

The appendices present charts for checking stock and for a systematic listing of just what should be done in the pharmacy.

M. O. HOLLAND.

OUR CONTRIBUTORS THIS MONTH

Robert W. Rodman, Ph. G., former editor of *Druggist's Circular* is now editor of the Practical Pharmacy Edition of the *Journal of the American Pharmaceutical Association*. This journal is happy to carry an article by one whose contributions to pharmaceutical journalism have been outstanding.

T. Swann Harding, B. S., Editor of Scientific Publications of the Department of Agriculture again this month discusses the effect of recent legislation on a group of products of interest to pharmacy.

